

## UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)								DATE <b>February 2000</b>	
BUDGET ACTIVITY <b>07 - Operational System Development</b>				PE NUMBER AND TITLE <b>0207161F Tactical AIM Missiles</b>				PROJECT <b>674132</b>	
COST (\$ in Thousands)	FY 1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
674132    AIM-9 Product Improvement	49,348	40,513	21,706	3,510	4,847	16,451	5,836	0	241,429
Quantity of RDT&E Articles	1	5	6	11	0	0	0	0	23

Note: The RDT&E articles are deliverables under the Engineering and Manufacturing Development contract and are not separately priced. Quantities are delivered in the indicated Fiscal Years. Deliveries support restructured program.

(U) **A. Mission Description**

The AIM-9X is a long-term evolution of the AIM-9, a fielded system, qualifying this as a research category operational systems development. The AIM-9X (Sidewinder) short range air-to-air missile modification program provides a launch and leave, air combat munition that uses passive infrared (IR) energy for acquisition and tracking of enemy aircraft and complements the Advanced Medium Range Air-to-Air Missile. Air superiority in the short range air-to-air missile arena is essential and includes first shot, first kill opportunity against an enemy employing IR countermeasures. The AIM-9X employs several components common with the AIM-9M. Anti-Tamper features are being incorporated to protect improvements inherent in AIM-9X design. AIM-9X is an Acquisition Category ID (ACAT ID) joint-service program with Navy lead.

Status: The program is on track to meet LRIP entry criteria in Aug 00. As of Jan 00, the AIM-9X test program has demonstrated capabilities beyond those of the currently fielded AIM-9M short range missile. USAF and USN warfighters have jointly emphasized the need to aggressively field the AIM-9X to counter the already fielded and superior threat air-to-air systems.

(U) **FY 1999 (\$ in Thousands)**

(U) \$31,505	Continued the manufacturing development contract and accept delivery of one test article
(U) \$6,602	Continued providing aircraft interface support to the Engineering and Manufacturing Development (EMD) contractor, incorporate results of wind tunnel test for the F-15 and F-18
(U) \$7,354	Continued Developmental Test IIB (DT-IIB), and start DT-IIC (Guided Launches), Operational Test IIA (OT-IIA) (Guided Launches), and conduct insensitive munitions tests at multiple test sites
(U) \$831	Field engineering support for government flight test activities
(U) \$2,518	Provided program office management support to include working capital funded personnel, supplies, and travel
(U) \$538	Provided contractor services support to the program office
(U) \$49,348	Total

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<p>(U) <b><u>A. Mission Description Continued</u></b></p> <p>(U) <b><u>FY 2000 (\$ in Thousands)</u></b></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">(U) \$19,635</td> <td>Continue the manufacturing development contract to include Technical Readiness Review (TRR), Production Readiness Review (PRR) leading to a Defense Acquisition Board Low Rate Initial Production (LRIP) decision in 4th Qtr FY00 with production option award in FY01, and delivery of five test articles. Continue flight testing (DT) and OT flight test support for Operational Assessment.</td> </tr> <tr> <td>(U) \$1,300</td> <td>Continue providing aircraft interface data to the EMD contractor in support of OT-IIA and DT-IIC and complete OT-IIA</td> </tr> <tr> <td>(U) \$14,343</td> <td>Continue providing government flight test support of ongoing activities defined in DT-IIB and Captive Carry Reliability Flight Program at multiple test sites</td> </tr> <tr> <td>(U) \$1,699</td> <td>Field engineering support for government flight test activities</td> </tr> <tr> <td>(U) \$2,814</td> <td>Provide program office management support to include working capital funded personnel, supplies, and travel</td> </tr> <tr> <td>(U) \$722</td> <td>Provide for consulting services, technical engineering, and management support</td> </tr> <tr> <td>(U) \$40,513</td> <td>Total</td> </tr> </table> <p>(U) <b><u>FY 2001 (\$ in Thousands)</u></b></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">(U) \$10,095</td> <td>Continue the manufacturing development contract to include completion of DT-IIB/C and start of DT-IID Launches and delivery of six test articles</td> </tr> <tr> <td>(U) \$1,181</td> <td>Continue providing aircraft interface support to the EMD contractor</td> </tr> <tr> <td>(U) \$8,183</td> <td>Continue providing government flight test support of activities defined as DT-IID and DT Assist (with operational testers) at multiple test sites</td> </tr> <tr> <td>(U) \$602</td> <td>Field engineering support for government flight test activities</td> </tr> <tr> <td>(U) \$1,422</td> <td>Provide program office management support to include working capital funded personnel, supplies, and travel</td> </tr> <tr> <td>(U) \$223</td> <td>Provide for consulting services, technical engineering, and management support</td> </tr> <tr> <td>(U) \$21,706</td> <td>Total</td> </tr> </table> <p>(U) <b><u>B. Budget Activity Justification</u></b></p> <p>This program is in budget activity 7 - Operational System Development, since the AIM-9X is a modification to the already fielded AIM-9M and a long term evolution of the AIM-9 series of air-to-air missiles.</p>			(U) \$19,635	Continue the manufacturing development contract to include Technical Readiness Review (TRR), Production Readiness Review (PRR) leading to a Defense Acquisition Board Low Rate Initial Production (LRIP) decision in 4th Qtr FY00 with production option award in FY01, and delivery of five test articles. Continue flight testing (DT) and OT flight test support for Operational Assessment.	(U) \$1,300	Continue providing aircraft interface data to the EMD contractor in support of OT-IIA and DT-IIC and complete OT-IIA	(U) \$14,343	Continue providing government flight test support of ongoing activities defined in DT-IIB and Captive Carry Reliability Flight Program at multiple test sites	(U) \$1,699	Field engineering support for government flight test activities	(U) \$2,814	Provide program office management support to include working capital funded personnel, supplies, and travel	(U) \$722	Provide for consulting services, technical engineering, and management support	(U) \$40,513	Total	(U) \$10,095	Continue the manufacturing development contract to include completion of DT-IIB/C and start of DT-IID Launches and delivery of six test articles	(U) \$1,181	Continue providing aircraft interface support to the EMD contractor	(U) \$8,183	Continue providing government flight test support of activities defined as DT-IID and DT Assist (with operational testers) at multiple test sites	(U) \$602	Field engineering support for government flight test activities	(U) \$1,422	Provide program office management support to include working capital funded personnel, supplies, and travel	(U) \$223	Provide for consulting services, technical engineering, and management support	(U) \$21,706	Total
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<div style="display: flex; justify-content: space-between;"> <span>Project 674132</span> <span>Page 2 of 7 Pages</span> <span>Exhibit R-2 (PE 0207161F)</span> </div>																														

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)				DATE <b>February 2000</b>
BUDGET ACTIVITY	PE NUMBER AND TITLE			PROJECT
<b>07 - Operational System Development</b>	<b>0207161F Tactical AIM Missiles</b>			<b>674132</b>
(U) <b><u>C. Program Change Summary (\$ in Thousands)</u></b>				
	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Total Cost</u>
(U) Previous President's Budget (FY 2000 PBR)	52,604	41,007	17,399	240,212
(U) Appropriated Value	52,966	41,007		
(U) Adjustments to Appropriated Value				
a. Congressional/General Reductions	-212	-15		
b. Small Business Innovative Research	-1,599			
c. Omnibus or Other Above Threshold Reprogram		-223		
d. Below Threshold Reprogram	-1,381			
e. Rescissions	-426	-256		
f. Other				
(U) Adjustments to Budget Years Since FY 2000 PBR			4,307	
(U) Current Budget Submit/FY 2001 PBR	49,348	40,513	21,706	241,429
(U) <b><u>Significant Program Changes:</u></b>				
General: The AIM-9X program has developed two restructuring efforts since the submission of the FY00 PB. The Jul 99 restructure resulted from the eight month delay in the flight test program and moved full rate production (MS III) from FY02 to FY03, changed the original FY02 full rate procurement (FRP) into a third LRIP, and adjusted completion of the OT-IIB period while maintaining a FY02 Required Assets Availability (RAA) date. The second restructure was due to the Appropriations Conference zeroing of FY00 procurement funding. This moves the LRIP 1 contract award into FY 01, slips FRP award into FY04 and the RAA date slips into FY03.				
Funding: The FY01 increase of \$4,307 is needed to support flight test activities. The delayed start of the flight test program moved test activities programmed in FY00 into FY01. Increased contractor and government support is required under the restructured program. The funding was available as a result of the program restructure, which reduced the number of missiles procured in FY01 and adjusted the procurement and RDT&E funding. Out year RDT&E funding will include an initiative to design launcher modifications to relocate older AIM-9M fin retention clips to accommodate AIM-9X (fin clips not needed and interfere with separation in high dynamic engagements) as well as P3I requirements.				
Schedule: The program is on track to meet LRIP entry criteria in Aug 00. It is important to note that the DAB will be held in 4QFY00 to ensure we are able to award the LRIP 1 production option in 1QFY01. The flight test program has completed three guided firings demonstrating improved capabilities over the fielded AIM-9M.				

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(U) <b><u>D. Other Program Funding Summary (\$ in Thousands)</u></b>									
	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	
(U) AF RDT&E									
(U) Other APPN									
(U) Missile Procurement, P-1 line item Tactical AIM Missile Modification	0	0	25,510	46,079	65,409	83,014	65,781	846,127	1,131,920
(U) SEEK EAGLE	0	0	2,918	5,331	1,944	0	4,266	Continuing	TBD
(U) <b><u>E. Acquisition Strategy</u></b>									
After a full and open competition, a Cost Plus Incentive Fee/Award Fee contract was awarded to Hughes Missile Systems Company (now Raytheon Systems Corp (RSC)) to complete missile system development and prepare for production. This EMD contract includes three Fixed Price Incentive Fee options for Low Rate Initial Production (LRIP) Lots 1, 2, and 3. These production options are planned to be exercised in FY01, FY02, and FY03. The EMD contract and production options provide strong incentives for the contractor to control costs, achieve reliability performance and deliver on schedule. The DAB will make the LRIP decision.									
The Navy Acquisition Executive will make the Full Rate Production (FRP) decision with advice from the Air Force Acquisition Executive subsequent to the successful completion of the associated exit criteria. FRP Lots 4 through 7 contracts will be Firm Fixed-Price (FFP) with incentives provided if the contractor meets or beats his Procurement Price Commitment Curve (PPCC), a quantity price curve provided by RSC with the EMD proposal. Rewards or penalties are provided depending on RSC's performance relative to the PPCC. A Service review of RSC's Lot 4 through 7 proposals relative to the PPCC will be held prior to award of those contracts.									
(U) <b><u>F. Schedule Profile</u></b>									
	<u>FY 1999</u>			<u>FY 2000</u>			<u>FY 2001</u>		
	1	2	3	4	1	2	3	4	1
(U) DT-IIB Safe Separation Launches Start		*							
(U) DT-IIC Guided Launches Start			*						
(U) Conduct Insensitive Munitions Tests				*					
(U) OT-IIA (Guided Launches) Starts					*				
(U) PRR for LRIP									X
(U) DT-IID (Launches) Starts									X
(U) LRIP DAB									X
(U) LRIP 1 Award								X	
(U) DT Assist Starts									X
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BUDGET ACTIVITY <b>07 - Operational System Development</b>	PE NUMBER AND TITLE <b>0207161F Tactical AIM Missiles</b>	PROJECT <b>674132</b>

(U) **F. Schedule Profile Continued**

<u>FY 1999</u>				<u>FY 2000</u>				<u>FY 2001</u>						
	1	2	3	4		1	2	3	4		1	2	3	4
* Completed Events														
X Planned Events														

Note: The above schedule profile reflects the Overarching IPT approved program adjusted to compensate for late start of the first AIM-9X separation flight test program. Since that time, the program has executed a total of eight separation flights and three guided tests between the Air Force and Navy to hold schedule. The fact-of-life Congressional decision to eliminate FY00 procurement funding moved the LRIP 1 contract award to 1QFY01. Other identified events remain the same.

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 2000			
BUDGET ACTIVITY					PE NUMBER AND TITLE				PROJECT	
07 - Operational System Development					0207161F Tactical AIM Missiles				674132	
(U) A. Project Cost Breakdown (\$ in Thousands)										
					FY 1999		FY 2000		FY 2001	
(U) Project Cost Categories										
(U) a. Primary Hardware Development					31,505		19,635		10,095	
(U) b. Contractor Engineering Support (F-15 AIM-9X Aircraft Integration)					6,602		1,300		1,181	
(U) c. Development and Test Evaluation					7,354		14,343		8,183	
(U) d. Government Engineering Support					831		1,699		602	
(U) e. Program Management (PMA)					2,518		2,814		1,422	
(U) f. Contractor Services Support					538		722		223	
(U) Total					49,348		40,513		21,706	
(U) B. Budget Acquisition History and Planning Information (\$ in Thousands)										
(U) Performing Organizations:										
<u>Contractor or</u>		<u>Contract</u>								
<u>Government</u>		<u>Method/Type</u>		<u>Award or</u>		<u>Performing</u>		<u>Project</u>		
<u>Performing</u>		<u>or Funding</u>		<u>Obligation</u>		<u>Activity</u>		<u>Office</u>		<u>Total Prior</u>
<u>Activity</u>		<u>Vehicle</u>		<u>Date</u>		<u>EAC</u>		<u>EAC</u>		<u>to FY 1999</u>
								<u>Budget</u>		<u>Budget</u>
								<u>FY 1999</u>		<u>FY 2000</u>
								<u>FY 2001</u>		<u>Budget to</u>
								<u>Complete</u>		<u>Total</u>
										<u>Program</u>
<u>Product Development Organizations</u>										
Hughes		C/CPIF		Dec 94		5,694		5,694		5,694
Raytheon		C/CPIF		Dec 94		5,695		5,695		5,695
Raytheon		C/CPIF		Dec 96		136,930		136,930		52,350
Boeing		C/CPIF		Jan 96		20,397		20,397		9,505
Engineering Services		Various		Various		N/A		N/A		13,558
Program Management*		PO		Various		N/A		N/A		5,782
Note*: Based on a Memorandum of Agreement, RDT&E program costs includes Navy PMA working capital funded personnel funded at 50%/50% ratio per Service.										
<u>Support and Management Organizations</u>										
Various Contracts		FFP		Various		N/A		N/A		1,273
										538
										722
										223
										135
										2,891
<u>Test and Evaluation Organizations</u>										
Field Activities		PO		Oct 96		N/A		N/A		5,138
										7,354
										14,343
										8,183
										5,118
										40,136
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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 2000		
BUDGET ACTIVITY				PE NUMBER AND TITLE				PROJECT	
07 - Operational System Development				0207161F Tactical AIM Missiles				674132	
(U) <u>Government Furnished Property:</u>									
	<u>Contract</u>								
<u>Item</u>	<u>Method/Type</u>	<u>Award or</u>	<u>Delivery</u>	<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Description</u>	<u>or Funding</u>	<u>Obligation</u>	<u>Date</u>	<u>to FY 1999</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Complete</u>	<u>Program</u>
<u>Product Development Property</u>									
N/A	N/A	N/A	N/A	0	0	0	0	0	0
<u>Support and Management Property</u>									
N/A	N/A	N/A	N/A	0	0	0	0	0	0
<u>Test and Evaluation Property</u>									
N/A	N/A	N/A	N/A	0	0	0	0	0	0
<u>Subtotals</u>				<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
				<u>to FY 1999</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Complete</u>	<u>Program</u>
Subtotal Product Development				92,584	41,456	25,448	13,300	25,614	198,402
Subtotal Support and Management				1,273	538	722	223	135	2,891
Subtotal Test and Evaluation				5,138	7,354	14,343	8,183	5,118	40,136
Total Project				98,995	49,348	40,513	21,706	30,867	241,429

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